


<p>Prof Dr Sergey SEMENOV, Corresponding member of the Russian Academy of Sciences</p> <p>Born 21.07.1948 in Moscow, USSR/Russian Federation, married, has two daughters</p> <p>Languages: Russian (mother tongue), English.</p>		
Education/Academic Degrees		
<i>Year</i>	<i>Institution</i>	<i>Degree</i>
1970	Moscow State University, Russia	Mathematician (eq. MSc)
1974.	Moscow State University, Russia	Candidate of Physical and Mathematical Sciences (eq. PhD) in Mathematics
1985	Institute of Biophysics, Krasnoyarsk, Russia	Doctor of Physical and Mathematical Sciences (eq. DSc) in Biophysics
Other Degrees		
	<i>Granted by</i>	<i>Year</i>
Senior Research Scientist (Ecology)	Supreme Qualification Council of the USSR	1985
Professor (Ecology)	Supreme Qualification Council of the Russian Federation	1997
Corresponding member of the Russian Academy of Sciences (Physics of the Atmosphere, Climatology)	Russian Academy of Sciences	2022
Scientific awards		
	<i>Granted by</i>	<i>Year</i>
E.K. Fedorov prize	Federal Service for Hydrometeorology and Environmental Monitoring, Russia	2000
A.I. Voeikov prize	Federal Service for Hydrometeorology and Environmental Monitoring, Russia	2014
Yu.A. Izrael Gold Medal	Russian Academy of Sciences	2020
State awards		
	<i>Granted by</i>	<i>Year</i>
The title Honored Scientist of the Russian Federation	President of the Russian Federation	2008
Medal of the Order of Merit to the Fatherland, II Degree	President of the Russian Federation	2018
Employment (full time)		
<i>Position</i>	<i>Institution</i>	<i>Years</i>
Science Director	Yu.A. Izrael Institute of Global Climate&Ecology, Moscow, Russia	2017 to present
Director	Institute of Global Climate & Ecology, Moscow, Russia	2011 – 2017
Deputy Director (Science)	Institute of Global Climate & Ecology, Moscow, Russia	1997-2011
Head of Department	Terrestrial Ecology and Bioclimatology Department, Institute of Global Climate & Ecology, Moscow, Russia	1990-1997

Head of Department	Ecological Monitoring Department, Natural Environment and Climate Monitoring Laboratory, Moscow, Russia	1985-1990
Senior Research Scientist	Ecological Monitoring Department, Natural Environment and Climate Monitoring Laboratory, Moscow, Russia	1979-1985
Senior Research Scientist	Institute of Applied Geophysics, Moscow, Russia	1976-1979
Junior Research Scientist	Institute of Applied Geophysics, Moscow, Russia	1974-1976
Junior Research Scientist	Upgrading Institute for Engineers and Managers, Moscow, Russia	1973-1974
Postgraduate Fellow	Department of Mathematics and Mechanics, Moscow State University, Moscow, Russia	1970-1973
Current part time employment		
<i>Position</i>	<i>Institution</i>	<i>Years</i>
Lead Scientist, Head of Laboratory, Chief Scientist	Laboratory of Climatology (currently), Institute of Geography, Russian Academy of Sciences, Moscow, Russia	1997 to present
Membership at professional societies		
<i>Society</i>	<i>Elected in</i>	
Moscow Mathematical Society	1976	
Russian Ecological Academy	2001	
Russian National Committee on Theoretical and Applied Mechanics	2011	
International scientific activity		
<i>International body</i>	<i>Position/function</i>	<i>Years</i>
International Co-operative Programme on Integrated Monitoring of Air Pollution Effects on the Ecosystems (UN ECE)	Member of the Task Force Group	1989 - 2006
Intergovernmental Panel on Climate Change (IPCC)	Lead Author, First Assessment Report, Working Group II	1988 - 1990
Intergovernmental Panel on Climate Change (IPCC)	Lead Author, Third Assessment Report, Working Group II	1998 -2001
Intergovernmental Panel on Climate Change (IPCC)	Lead Author, Special Report on Land Use, Land Use Change and Forestry	1998 - 2000
Intergovernmental Panel on Climate Change (IPCC)	Coordinating Lead Author, Fourth Assessment Report, Working Group II; Co-Anchor, cross-cutting theme "Key Vulnerabilities and the Science of Article 2 of the UN FCCC".	2003 – 2007
Intergovernmental Panel on Climate Change (IPCC)	IPCC Bureau member, Fifth Assessment Report, Sixth Assessment Report, Working Group II	2008-2023

Current editorial activity		
<i>Journal</i>	<i>Position</i>	<i>Years</i>
Meteorology and Hydrology (ISSN 0130-2906, published in Russia),	Member of the Editorial Board	2014 to present
Fundamental and Applied Climatology, (ISSN 2410-8758, published in Russia).	Editor-in-Chief	2015 to present

Scientific publications: over 200 scientific articles and books in total, including

Books:

Semevsky F.N., **Semenov S.M.** Mathematical modelling of ecological processes. – Leningrad, Gidrometeoizdat, 1982, 280 pp. (in Russian)

Semenov S. M., Kunina I. M., Koukhta B. A. Tropospheric ozone and plant growth in Europe. Moscow, Publishing Centre “Meteorology and Hydrology”, 1999, 207 pp. (in Russian) ISBN 5-7699-0009-1.

Semenov S.M. Greenhouse gases and present climate of the Earth. - Moscow, Publishing Centre “Meteorology and Hydrology”, 2004, 175 pp., (in Russian) ISBN 5-7699-0019-9.

Semenov S.M., Yasukevich V.V., Gelver E. S. Identification of climatic changes. - Moscow, Publishing Centre “Meteorology and Hydrology”, 2006, 325 pp., (in Russian) ISBN 57699-0021-0.

Methods for assessment of consequences of climate change for physical and biological systems (**Semenov S. M., editor&leader**). - Moscow, Roshydromet, 2012, 510 pp., (in Russian) ISBN 978-5-904206-10-9.

Semenov S.M., Govor I.L., Uvarova N.E. The role of methane in the modern climate change. - Moscow, 2018, 106 pp., (in Russian) ISBN 978-5-9631-0687-7.

Selected peer-reviewed articles since 2000:

Semenov S.M. (2022) Greenhouse Effect and Modern Climate. - *Russian Meteorology and Hydrology*, 2022, Vol. 47, No. 10, pp. 725–734. doi: 10.3103/S1068373922100016
Translated from: *Meteorologiya i Gidrologiya*, 2022, No. 10, pp. 5–17.

Semenov S.M., Gladilshchikova A.A. (2022) Scenarios of anthropogenic changes in the climate system in the 21st century, *Fundamental and Applied Climatology*, 2022, vol. 8, no. 1, pp. 75-106, doi:10.21513/2410-8758-2022-1-75-106 (in Russian).

Lipka O.N., Korzukhin M.D., Zamolodchikov D.G., Dobrolyubov N.Yu., Krylenko S.V., Bogdanovich A.Yu., **Semenov S.M.** THE ROLE OF FORESTS IN THE ADAPTATION OF NATURAL SYSTEMS TO CLIMATE CHANGE.- *LESOVEDENIE*, 2021, No. 5, p. 531-546 (in Russian) DOI: 10.31857/S0024114821050077.

Popov I. O., **Semenov S. M.**, Popova E. N. Assessment of Climatogenic Hazard of the Taiga Tick *Ixodes persulcatus* Distribution in and Neighboring Countries at the Beginning of the 21st Century.- *Izvestia RAN. SERIES GEOGRAPHIC*, vol. 85, № 2 2021, p. 231-237 (in Russian)
DOI: 10.31857/S2587556621020138.

Bogdanovich A.Yu., Pavlova V.N., Rankova E.Ya., **Semenov S.M.** (2021) Influence of changes in aridity in Russia in the 21st century on the suitability of territories for the cultivation of grain crops. *Fundamental and Applied Climatology*, vol. 7, N 1, pp. 20-35. DOI:10.21513/2410-8758-2021-1-30-35.

Semenov S.M. Stability of equilibrium in a one-dimensional hydrostatic model of the dry atmosphere *Fundamental and Applied Climatology*. Vol 7, N 1, 2021, p. 138-152 DOI: 10.21513/2410-8758-2020-4-104-120.

Semenov S.M., Popov I.O., Yasyukevich V.V. Statistical Model for Assessing the Formation of Climate-related Hazards Based on Climate Monitoring Data.- *Russian Meteorology and Hydrology*, 2020, Vol. 45, No. 5, pp. 339–344, ISSN 1068-3739.

Kuzovkin V.V., **Semenov S.M.** Growth Rate of Carbon Dioxide Concentration in the Atmospheric Surface Layer in the Late 20th Century and Early 21st Century *Russian Meteorology and Hydrology*, 2020, Vol. 45, No. 3, pp. 207–210. ISSN 1068-3739.

Semenov S.M., Stability of equilibrium in a one-dimensional hydrostatic model of the dry atmosphere. *Fundamental and Applied Climatology*. vol. 7, N 1, 2021, p. 138-152, DOI: 10.21513/2410-8758-2020-4-104-120.

Semenov S.M., Insarov G.E., Méndez C.L. 2019. Characterization of uncertainties in assessments of the Intergovernmental Panel on Climate Change. *Fundamental and Applied Climatology*, vol. 2, pp. 103-119. DOI: 10.21513/2410-8758-2019-2-103-119.

Semenov S.M., Ran'kova E. Ya. 2018. The features of multiyear changes and seasonal variability of present-day background concentrations of CO₂, CH₄, and N₂O at the global monitoring stations. *Fundamental and Applied Climatology*, vol. 4, pp. 105-121. DOI: 10.21513/2410-8758-2018-4-105-121.

Semenov S.M. 2018. Similarity of present-day variations in methane background concentrations in the surface layer of the atmosphere at different latitudes. *Fundamental and Applied Climatology*, vol. 3, pp. 124-137. DOI: 10.21513/2410-8758-2018-3-124-137.

Popova E.N., Popov I.O., **Semenov S.M.** 2018. Assessment of Variations in the Annual Sum of Active Temperatures and Total Precipitation during the Vegetation Period in Russia and Neighboring Countries. *Russian Meteorology and Hydrology*, vol. 43, Iss. 6, pp. 412-417. DOI: 10.3103/S1068373918060092.

Popova E. N., **Semenov S. M.**, Popov I. O. Assessment of Possible Expansion of the Climatic Range of Italian Locust (*Calliptamus italicus* L.) in Russia in the 21st Century at Simulated Climate Changes, *Russian Meteorology and Hydrology*, 2016, Vol. 41, No. 3, pp. 213–217. ISSN 1068-3739.

Korneva I. A., **Semenov S. M.** Surface Temperature Response to Variations in Atmospheric Albedo: Estimating the Radiation Effect, *Russian Meteorology and Hydrology*, 2016, Vol. 41, No. 5, pp. 307–311, ISSN 1068-3739.

Popova E. N., **Semenov S. M.**, Current and Expected Changes in Colorado Beetle Climatic Habitat in Russia and Neighboring Countries, *Russian Meteorology and Hydrology*, 2013, Vol. 38, No. 7, pp. 509–514, ISSN 1068-3739.

Korzukhin M. D., Kolosov P. A., **Semenov S. M.** Applying Dalton's Law of Potential Evaporation Rate over the Territory of Russia and Neighboring Countries Using Long-term Observation Data, *Russian Meteorology and Hydrology*, 2011, Vol. 36, No. 12, pp. 786–793. ISSN 1068-3739.

Semenov S. M., Popov I. O. Comparative Estimates of Influence of Changes in Carbon Dioxide, Methane, Nitrous Oxide, and Water Vapor Concentrations on Radiation-Equilibrium Temperature of Earth's Surface *Russian Meteorology and Hydrology*, 2011, Vol. 36, No. 8, pp. 520–526, ISSN 1068-3739.

Korzukhin M. D., Tselniker Yu. L., **Semenov S. M.** Ecophysiological Model of Net Primary Production of Woody Species and Estimation of Their Climatic Ranges, *Russian Meteorology and Hydrology*, 2008, Vol. 33, No. 12, pp. 790–800. ISSN 1068-3739.

Izrael Yu.A., **Semenov S.M.** 2006. Critical Levels of Greenhouse Gases, Stabilization Scenarios, and Implications for the Global Decisions. In: *Avoiding Dangerous Climate Change / Schellnhuber, H.J., Cramer, W., Nakicenovic, N., Wigley, T. and Yohe, G. (Eds). Cambridge University Press, 2006, pp. 73-79.*

Semenov S.M., Koukhtha B.A., Gel'ver E.S. Nonlinearity of climate-driven changes in phenological dates in woody plants. *Doklady Biological Sciences*, Vol. 396, 2004, pp. 221–223.

Izrael Yu. A., **Semenov S. M.** 2003: Example calculation of critical limits for greenhouse gas content in the atmosphere using a minimal simulation model of the greenhouse effect. *Doklady Earth Sciences*, vol. 390, Nos 1-4, May-June 2003), Volume 390, Number 4, p. 611-614.

Semenov S.M., Gel'ver E.S. Climatic changes in the total annual precipitation and frequency of measured precipitation over the territory of Russia and adjacent countries in the 20th century. *Doklady Earth Sciences. Geophysics*. Vol. 393a, No 9, 2003, pp. 1338-1341.

Semenov S. M., Gelfer E. S., Yasyukevich V. V. 2002: Temperature conditions for development of two species of malaria pathogens in the vector organism in Russia in the 20th century. *Doklady Biological Sciences*. Volume 387, November-December 2002, p. 523-528.

Semenov S. M., Gelfer E. S. 2002: Variations in the yearly course of daily mean temperature over the Russian Territory in the 20th century. *Doklady Earth Sciences*. Volume 386, Number 7, September-October 2002, p. 846-850.

Developing and applying scenarios. 2001. / T. Carter, E.L. la Rovere, R.N. Jones, R. Leemans, L.O. Mearns, N. Nakicenovich, A.B. Pittock, **S.M. Semenov**, J. Skea / In: *Climate Change 2001. Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel of Climate Change*. (McCarthy J.J., Canziani O.F., Leary N.A., et al., editors). Cambridge University Press, pp. 147-190.

Global perspective. 2000. / B. Bolin, R. Sukumar, P. Ciaais, W. Cramer, P. Jarvis, C. Nobre, **S.M. Semenov**, W. Steffen / In: *Land Use, Land-use Change, and Forestry. Special Report of the Intergovernmental Panel on Climate Change* (Watson R. T., Noble I. R., Bolin B., et al., editors). Cambridge University Press, pp. 25-51.

Leading the national climate assessments		
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- **Leader of the preparation:** First assessment report on climate change and its consequences in Russian Federation. Vol. II. Consequences of climate change. - Moscow, Roshydromet, 2008, 288 pp., ISBN 978-5-904206-05-5 (in Russian)
- **Co-leader of the preparation:** Second Roshydromet assessment report on climate change and its consequences in Russian Federation. - Moscow, Roshydromet, 2014, 1009 pp., ISBN 978-5-9631-0322-7 (in Russian).